evaluate populations exposed to Level II concentrations.

Section 6.3.2.4 Potential contamination. Explains how to assign values to populations potentially exposed to contamination from the site. The formula for calculating population values has been revised. Table 6–17, which assigns distance-weighted values for populations in each distance category, has been added. The values in the table were determined by statistical simulation to yield the same population, on average, as the use of the formulas in the proposed rule. The use of population ranges has been adopted as part of the simplification discussed in section III A. The rounding rule has been changed, the scoring cap was eliminated, and the multiplier (i.e., weight) is now 0.1.

Section 6.3.2.5 Calculation of the population factor value. Explains how to calculate the factor value. The scoring cap was eliminated.

Section 6.3.3 Resources. Explains how to assign points to resources, which in this pathway is based on the presence of commercial agriculture, commercial silviculture, and major or designated recreation areas.

Section 6.3.4 Sensitive environments. Explains how sensitive environments are evaluated based on actual and potential contamination. The maximum value that can be assigned to this factor is limited, but is greater than in the proposed rule. The limit is determined by scoring the pathway with only sensitive environments in the targets factor category; the pathway score under these conditions may not exceed 60 points.

Section 6.3.4.1 Actual contamination. Explains how to assign factor values for sensitive environments subject to actual contamination and how to assign values to wetlands based on total acreage. A new Table 6–18, Wetlands Rating Values for the Air Migration Pathway, has been added to assign values to wetlands based on acreage.

Section 6.3.4.2 Potential contamination. Explains how to calculate the factor value for potentially contaminated sensitive environments and how to assign values to wetlands based on total acreage within each distance category. The rounding rule has been changed.

Section 6.3.4.3 Calculation of sensitive environments factor value. Explains how to calculate the factor value. The rounding rule has been changed.

Section 6.3.5 Calculation of targets factor category value. Text has been revised to reflect the new names for factors.

Section 6.4 Calculation of air migration pathway score. Text has been revised to reflect the new divisor.

In addition to the above noted changes, the land use factor, Figure 2–2, and Tables 2–2, 2–3, 2–13, 2–17, and 2–19 in the proposed rule have been removed.

Section 7 Sites Containing Radioactive Substances

This entire part of the rule is new. As discussed in section III E of the preamble, this section has been added to provide direction on evaluating sites containing radioactive substances. Table 7–1 lists factors evaluated differently for such sites.

Section 7.1 Likelihood of release/ likelihood of exposure. Explains the approach to evaluating the factor category.

Section 7.1.1 Observed release/ observed contamination. Explains how to evaluate observed release (observed contamination) for radionuclides. The evaluation differs for radionuclides that occur naturally or are ubiquitous in the environment, for man-made radionuclides without ubiquitous background concentrations in the environment, and for gamma-emitting radionuclides in the soil exposure pathway. This section also explains the appropriate procedures for sites with mixed radioactive and other hazardous substances.

Section 7.1.2 Potential to release. Explains that potential to release factors are evaluated on the physical and chemical properties of radionuclides, not their radioactivity.

Section 7.2 Waste characteristics. Lists the factors evaluated.

Section 7.2.1 Human toxicity. Explains how to assign toxicity values to radioactive substances and describes appropriate procedures for sites containing mixed radionuclides and other hazardous substances.

Section 7.2.2 Ecosystem toxicity. Explains that ecosystem toxicity for radionuclides is assigned a value in the same way as is human toxicity except that the default value is 100 rather than 1,000.

Section 7.2.3 Persistence. Explains that radioactive substances are assigned persistence values based solely on half-life—radioactive half-life and volatilization half-life. Explains how to evaluate persistence for mixed radioactive and other hazardous substances.

Section 7.2.4 Selection of the substance potentially posing greatest hazard. The section explains how to select the substance potentially posing the greatest hazard.

Section 7.2.5 Hazardous waste quantity. Explains how to evaluate the hazardous waste quantity factor for sites containing radioactive substances.

Section 7.2.5.1 Source hazardous waste quantity for radionuclides. Describes differences between the migration pathways and the soil exposure pathway.

Section 7.2.5.1.1 Radionuclide constituent quantity (Tier A). Explains how to evaluate radionuclide constituent quantity for radionuclides.

Section 7.2.5.1.2 Radionuclide wastestream quantity (Tier B). Explains how to evaluate radionuclide wastestream quantity for radionuclides.

Section 7.2.5.1.3 Calculation of source hazardous waste quantity value for radionuclides. Explains how to assign a source value.

Section 7.2.5.2 Calculation of hazardous waste quantity factor value for radionuclides. Explains how to calculate the hazardous waste quantity factor value for radionuclides and describes use of the minimum value, which is either 10 or 100 (as described in section 2.4.2.2 above).

Section 7.2.5.3 Calculation of hazardous waste quantity factor value for sites containing mixed radioactive and other hazardous substances. Explains how to calculate the factor value for these sites.

Section 7.3 Targets. Explains how to evaluate targets at sites containing radioactive substances and sites containing radioactive and other hazardous substances.

Section 7.3.1 Level of contamination at a sampling location. Explains how to determine the appropriate level of contamination.

Section 7.3.2 Selection of benchmarks and comparisons with observed release/observed contamination. This section lists the benchmarks and explains how they are used in determining the level of contamination.

V. Required Analyses

A. Executive Order No. 12291

Under Executive Order No. 12291, the Agency must judge whether a regulation is "major" and thus subject to the requirement of a Regulatory Impact Analysis. The rule published today is not major because the rule will not result in an effect on the economy of $100 million or more, will not result in increased costs or prices, will not have significant adverse effects on competition, employment, investment, productivity, and innovation, and will

not significantly disrupt domestic and export markets.

To estimate the costs associated with the final rule, a final economic analysis entitled "Economic Impact Analysis of the Revised Hazard Ranking System" was prepared as an addendum to the December 1987 economic impact analysis (EIA) to incorporate new data. As in the January 1988 EIA, the total annual cost of implementing the final rule is estimated as a function of the number of Screening SIs (SSI) and Listing SIs (LSI) that will be conducted annually and the unit cost of each. In the January 1988 EIA, estimates of total costs were developed assuming 1,130 SSIs and 100 LSIs would be conducted annually. The Agency now estimates that 1,100 SIs will be conducted annually (EPA is no longer using the terms SSI and LSI). The total annual cost is estimated to be $78.8 million, the sum of the cost of conducting 1,000 SIs at a unit cost of $55,000, 70 SIs for NPL sites (without monitoring wells) at a unit cost of $100,000, and 30 SIs for NPL sites (with monitoring wells) at a unit cost of $160,000.

To estimate the incremental cost of implementing the final revised version of the HRS, the unit cost of conducting all preremedial listing activities using the current HRS from the January 1988 EIA is updated. That cost was estimated to be $58,200 in the January 1988 EIA, and was developed assuming the PA had already been conducted. The 1988 estimate is a function of 480 hours of Field Investigation Team (FIT) technical time valued at $40 per hour and 30 samples being evaluated at a unit cost of $1,300 per sample. To compare the costs of the current HRS to those developed above for the final revised version of the HRS, the FIT technical time is valued at $50 per hour and each sample evaluation is estimated to cost $1,000. The revised total cost of conducting all listing activities beyond the PA for the current HRS, therefore, is estimated to be $54,000. In addition, the average level of effort for a PA under the current HRS is estimated to be 60 hours, and the unit cost of the PA, assuming a $50 FIT hourly rate, is estimated to be $3,000.

Based on these revisions, the annual cost of using the current HRS is estimated to be $65.4 million, the sum of the cost of conducting 2,000 PAs at a unit cost of $3,000 ($6 million) and the cost of conducting 1,100 SIs at a unit cost of $54,000 ($59.4 million). Compared to the current HRS, the annual incremental cost of using the final revised version of the HRS is estimated to be $13.4 million. On the basis of this evaluation, implementing the final

revised version of the HRS would not constitute a major rule, because the annual incremental cost of the final rule is less than $100 million. No negative economic effects are anticipated from this rule.

B. Regulatory Flexibility Determination

Appendix A of the December 1987 EIA includes an assessment of the ability of responsible parties to pay the costs of HRS scoring under the current HRS and the three alternative scoring mechanisms considered at that time. That analysis evaluated the impact of HRS costs under each ranking methodology on the financial viability of 15 sample companies. Under that analysis, only the smallest sample firm (one with an average net income of $53,700) was expected to have difficulty in paying the costs of conducting a complete SI under each of the alternative ranking scenarios. The new unit cost of a complete SI developed during the Phase I field test and used in this economic analysis falls within the range of costs already evaluated in appendix A of the December 1987 EIA. Given the previous analysis, EPA concludes that most sample firms are healthy enough financially to be able to afford the expenditures associated with HRS site inspections. Responsible Parties (RPs) that are financially similar to the smallest firm (Firm 15 in appendix A of the December 1987 RIA), however, do not have the assets or the income to enable them to assume payments similar to the estimates derived for the SI done under the current HRS or the final revised version of the HRS.

The Regulatory Flexibility Act of 1980 requires that Federal agencies explicitly consider the effects of proposed and existing regulations on small entities and examine alternative regulations that would reduce significant adverse impacts on small entities. The small entities that could be affected by the revisions to the HRS are small businesses and small municipalities that are responsible for hazardous wastes at a site. Based on the updated analysis presented here, EPA concludes that using the final rule is unlikely to result in a significant impact on a substantial number of small entities. As discussed in the December 1987 EIA, this conclusion is drawn because small firms are no more or less likely to be responsible parties than are large firms. In addition, when they are RPs, small firms usually are one of several companies responsible for a site and probably would not bear the full burden of liability for HRS expenditures and other cleanup costs.

C. Paperwork Reduction Act

The information collection requirements contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq., and has assigned OMB control number 2050–0095.

Public reporting burden for this collection of information is estimated to be 620 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM—U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460; and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

D. Federalism Implications

E.O. 12612 requires agencies to assess whether a regulation will have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPA has determined that this regulation does not have federalism implications and that, therefore, a Federalism Assessment is not required.

List of Subjects in 40 CFR Part 300

Air pollution controls, Chemicals, Hazardous materials, Intergovernmental relations, Natural resources, Oil pollution, Reporting and recordkeeping, Superfund, Waste treatment and disposal, Water pollution control, Water supply.

Dated: November 9, 1990.

William K. Reilly,

Administrator.

40 CFR part 300 is amended as follows:

PART 300—[AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 42 U.S.C. 9605; 33 U.S.C. 1321(c)(2); E.O. No. 117535, 38 FR 21243; E.O No. 12580, 52 FR 2923.

2. Part 300, appendix A is revised to read as follows: